

Non-Fused Load Break Switches FSSC, SX, SXDC, SC

UL 98 Non-Fused Load Break Switches

Mersen disconnect switches are extremely durable, manually operated, non-fused disconnect switches. These heavy-duty switches are designed with the most up-to-date disconnect switch technology available. Designed to suit the UL98 or UL489 standard, the switch gives you a product that “makes and breaks” power circuits on load. The switches are tested and approved for use in demanding applications, such as “Service Entrance”. Up to 400A, the switches are available with visible blade contacts. A wide array of handles are available to meet OSHA padlocking requirements, NEMA configurations, defeater options and NFPA 79 requirements.

Features/Benefits

- UL 98 Service entrance rated
- Front or side operated switches
- Padlockable
- Compact
- Robust
- DIN-rail, panel or door mounting
- Lockable, defeatable external handles
- Side-mounted auxiliary contacts and additional poles available
- The SXDC switches are rated 600VDC UL and 1000VDC IEC

Highlights:

- Visible blade contacts up to 400 A
- Line side shrouding supplied with switch
- Defeatable pistol handles automatically re-latch when panel door is closed - no tool necessary to reset latch
- External or direct operation handles
- Flange operation (for use with side operated switches)
- Double-break, silver-plated contacts
- SX series has flexible terminal shields that allow for tighter wire bending

Applications:

- Service entrance or main panel disconnects up to 600VAC, 1200A
- “Make and break” power circuit applications on load
- NFPA 79 solutions
- Photovoltaic



Ratings:

- Volts** : 600VAC / DC
: UL and 1000VDC IEC
- Amps** : 30A, 60A, 100A, 200A,
400A, 600A, 800A,
1000A and 1200A
- SCCR** : Up to 200kA with fuses
Suitable as motor disconnect up
to 200hp

Approvals:

- All switches meet the requirements of UL and CSA
- UL listed guide WHTY, File E191605 for UL 98 (ratings from 30 A to 1200 A)
- CSA 22.2 # 4, class 4652-04, File 703166 (ratings from 30 A to 1200 A)
- IEC 947-3 CE mark (other IEC ratings up to 5,000A available on request, please consult us)



Non-Fused Load Break Switches FSSC

Catalog Numbers (amps) - FSSC

Compact, UL98

Select a Switch			Ampere Rating			30	60	100
			FSSC Non-fused Load Break Switch			FSSC30	FSSC60	FSSC100
Select a Handle & Shaft	Direct Operation Handle	No Shaft Required	Handle for Direct Front Operation					
		Select a Handle	Black			FSHD3	FSHD3	FSHD3
			Handle for External Front and Side Operation					
			NEMA Type	IEC	Color			
			1, 3R, 12	IP54	Black	FSH0BR	FSH0BR	FSH0BR
			1, 3R, 12	IP54	Red/Yellow	FSH0RR	FSH0RR	FSH0RR
			1, 3R, 12, 4X	IP65	Black	FSH0BR4	FSH0BR4	FSH0BR4
			1, 3R, 12, 4X	IP65	Red/Yellow	FSH0RR4	FSH0RR4	FSH0RR4
		Select a Shaft	150mm/5.9"			FS150	FS150	FS150
			200mm/7.9"			FS200	FS200	FS200
			320mm/12.6"			FS320	FS320	FS320
Select Accessories	Thru-door		Accessories					
			3-pole Terminal Shroud (line and load sides)			FSSCTS	FSSCTS	FSSCTS
			1-pole Terminal Shroud (line and load sides)			FSSCTS1	FSSCTS1	FSSCTS1
			Auxiliary Contacts, NO and NC			FSACNONC	FSACNONC	FSACNONC
			Auxiliary Contacts, both NO			FSACNONO	FSACNONO	FSACNONO

*Consult factory for availability.

UL and CSA Characteristics

Technical characteristics		30A	60A	100A
Short circuit rating at 480 VAC		100kA	100kA	100kA
Short circuit rating at 600 VAC		100kA	100kA	25kA
Fuse type		J	J	J
Max. fuse rating (A)		30	60	100
Max. horsepower rating / Max. motor FLA 3 ph				
220-240 VAC		10 / 28	20 / 54	20 / 54
440-480 VAC		20 / 27	40 / 52	50 / 65
600 VAC		25 / 27	50 / 52	50 / 52
Max. horsepower rating / Max. motor FLA single phase				
120 VAC		5 / 56	5 / 56	5 / 56
240 VAC		10 / 50	10 / 50	10 / 50
480 VAC		25 / 55	25 / 55	25 / 55
Connection				
Solid	1 wire	#12 - #10	#12 - #10	#12 - #10
	1 wire	#12 - 2/0	#12 - 2/0	#12 - 2/0
Auxiliary Contacts				
Electrical characteristic		A300	A300	A300

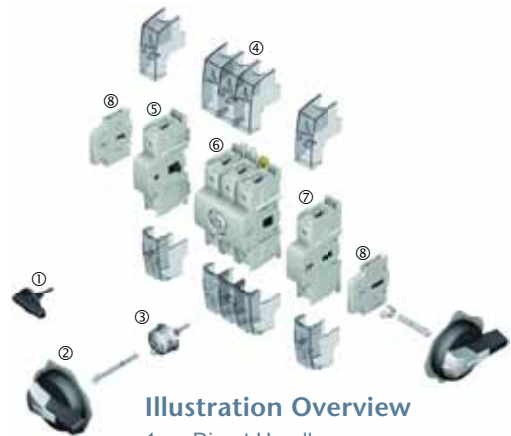


Illustration Overview

1. Direct Handle
2. Door-interlocked External Handle
3. Shaft for External Operation (includes collar)
4. Terminal Shrouds
5. Switched 4th Pole
6. Switch body
7. Unswitched Neutral or Ground Pole
8. NO/NC Auxiliary Contacts

Non-Fused Load Break Switches SX

Front Operated Range 100A to 400A - SX

High HP Rating!

Select a switch



Select a switch

Ampere Rating	Catalog Numbers		
	100	200	400
3-Pole	SX1003	SX2003	SX4003
4-Pole	SX1004	SX2004	SX4004

S type pistol handle for external front and side operation



Select a handle

NEMA Type	IEC	Color	Catalog Numbers		
1, 3R, 12	IP54	Black	HSPBL	HSPBL	HSPBL
1, 3R, 12	IP54	Red / Yellow	HSPRL	HSPRL	HSPRL
1, 3R, 12, 4, 4X	IP65	Black	HSPB4L	HSPB4L	HSPB4L
1, 3R, 12, 4, 4X	IP65	Red / Yellow	HSPR4L	HSPR4L	HSPR4L



Select a shaft

Shaft Length (in/mm)	Catalog Numbers		
7.9 / 200	SS200-10	SS200-10	SS200-10
12.6 / 320	SS320-10	SS320-10	SS320-10
15.7 / 400	SS400-10	SS400-10	SS400-10
19.7 / 500	SS500-10*	SS500-10*	SS500-10*

*Not UL

Pistol handle for direct front operation



	Color	Catalog Numbers		
Direct Handle for SX	Black	SXHD	SXHD	SXHD

Accessories



	Catalog Numbers		
Terminal lugs for 3-pole (set of 6)	TL200X6	TL200X6	TL400X6
Terminal lugs for 4-pole (set of 8)	TL200X8	TL200X8	TL400X8
1 Auxiliary Contact NO+NC	SXAUX	SXAUX	SXAUX
2 Auxiliary Contact NO+NC	SXAUX2	SXAUX2	SXAUX2
Top Terminal Screen 3-pole	SXTS2T3	SXTS2T3	SXTS4T3
Bottom Terminal Screen 3-pole	SXTS2B3	SXTS2B3	SXTS4B3
Top OR Bottom Terminal Screen 4-pole	SXTS2TB4	SXTS2TB4	SXTS4TB4

Please contact factory for visible blades and/or flange operation.

Note: Do not mount in a vertical position with window on top. Any other orientation is okay.

Non-Fused Load Break Switches SXDC

Front Operated Range 100A to 400A - SXDC **UL listed 600VDC load-break!**

Select a switch



Select a switch

Ampere Rating	Catalog Numbers		
	100	200	400
3-Pole	SXDC1003	SXDC2003	SXDC4003
4-Pole	SXDC1004	SXDC2004	SXDC4004

S type pistol handle for external front and side operation



Select a handle

NEMA Type	IEC	Color	Catalog Numbers		
1, 3R, 12	IP54	Black	HSPBL	HSPBL	HSPBL
1, 3R, 12	IP54	Red / Yellow	HSPRL	HSPRL	HSPRL
1, 3R, 12, 4, 4X	IP65	Black	HSPB4L	HSPB4L	HSPB4L
1, 3R, 12, 4, 4X	IP65	Red / Yellow	HSPR4L	HSPR4L	HSPR4L



Select a shaft

Shaft Length (in/mm)	Catalog Numbers		
7.9 / 200	SS200-10	SS200-10	SS200-10
12.6 / 320	SS320-10	SS320-10	SS320-10
15.7 / 400	SS400-10	SS400-10	SS400-10
19.7 / 500	SS500-10*	SS500-10*	SS500-10*

*Not UL

Pistol handle for direct front operation



	Color	Catalog Numbers		
Direct Handle for SX	Black	SXHD	SXHD	SXHD

Options for front & side operation



	Catalog Numbers		
Terminal lugs (set of 2)	TL200X2	TL200X2	TL400X2
Jumper bars (set of 2, for 3-pole)	SX2J	SX2J	SX4J*
Jumper bars (set of 3, for 4-pole)	SX2J4	SX2J4	SX4J4*
1 Auxiliary Contact NO+NC	SXAUX	SXAUX	SXAUX
2 Auxiliary Contact NO+NC	SXAUX2	SXAUX2	SXAUX2
Top Terminal Screen 3-pole	SXTS2T3	SXTS2T3	SXTS4T3
Bottom Terminal Screen 3-pole	SXTS2B3	SXTS2B3	SXTS4B3
Top or Bottom Terminal Screen 4-pole	SXTS2TB4	SXTS2TB4	SXTS4TB4

*If the application requires a heavy loading of the switch, doubling of the jumper bars may be necessary.

Note: Do not mount in a vertical position with window on top. Any other orientation is okay.

Non-Fused Load Break Switches sc

Front Operated Range from 600 to 1200A - SC



Select a switch

Ampere Rating	Catalog Numbers			
	600	800	1000	1200
3-pole	SC600	SC800	SC1000	SC1200
4-pole	SC6004	SC8004	SC10004	SC12004

S type pistol handle for front external operation



Select a handle

Recommended for easier switching

NEMA Type	IEC	Color	Catalog Numbers			
1, 3R, 12, 4, 4X	IP65	Black	HSTB4	HSTB4	HSTB4	HSTB4
1, 3R, 12, 4, 4X	IP65	Red / Yellow	HSTR4	HSTR4	HSTR4	HSTR4

Note: Handle is defeatable and is padlockable in the "OFF" position



Select a handle

Recommended for tighter spacing

NEMA Type	IEC	Color	Catalog Numbers			
1, 3R, 12	IP54	Black	HSPBEL	HSPBEL	HSPBEL	HSPBEL
1, 3R, 12	IP54	Red / Yellow	HSPREL	HSPREL	HSPREL	HSPREL
1, 3R, 12, 4, 4X	IP65	Black	HSPB4EL	HSPB4EL	HSPB4EL	HSPB4EL
1, 3R, 12, 4, 4X	IP65	Red / Yellow	HSPR4EL	HSPR4EL	HSPR4EL	HSPR4EL

Note: Handle is defeatable and is padlockable in the "OFF" position



Select a shaft

Shaft Length (in/mm)	Catalog Numbers			
7.9 / 200	SS200-15	SS200-15	SS200-15	SS200-15
12.6 / 320	SS320-15	SS320-15	SS320-15	SS320-15
15.7 / 400	SS400-15	SS400-15	SS400-15	SS400-15

Note: The small shaft protruding from the switch is 15mm x 15mm. The shaft for the handle is 12 x 12mm. A coupler is included and adapts from 12mm to 15mm.

Pistol handle for direct front operation



Select a handle

Color	Catalog Numbers			
Black	HADB5	HADB5	HADB5	HADB5

Options for front & side operation



Select a handle



Terminal Lugs Kit	Catalog Numbers			
Six lugs per kit - for 3-pole switches	TL600	TL800 ⁽⁴⁾	TL1200	TL1200
Eight lugs per kit - for 4-pole switches	TL6004	TL8004 ⁽⁴⁾	TL12004	TL12004
Terminal Screen ⁽¹⁾				
3-pole (for line or load side)	TS600SC	TS1200SC	TS1200SC	TS1200SC
4-pole (for line or load side)	TS6004SC	TS12004S	TS12004SC	TS12004SC
Auxiliary Contacts				
Auxiliary Contacts Holder ⁽²⁾	ACHSC	ACHSC	ACHSC	ACHSC
1 N / O, 10A, 600VAC snap-on contact block, A600-Q600, pre-break, late make	AC3	AC3	AC3	AC3
1 N / C, 10A, 600VAC snap-on contact block, A600-Q600, pre-break, late make	AC4	AC4	AC4	AC4
Padlocking facility for external operation ⁽³⁾	SWL01	SWL01	SWL01	SWL01

(1) Line side Terminal Screen supplied as standard with switch.

(2) ACHSC accommodates up to 4 auxiliary contacts.

(3) Allows to padlock the switch when door of the enclosure is open.

(4) TL1200 or TL12004 also fit if 4 holes are required.

Non-Fused Load Break Switches sx

Technical Characteristics for Front and Side Operation - SX

Catalog Numbers - UL, cUL and CSA

Catalog Numbers	SX1003 / SX1004	SX2003 / SX2004	SX4003 / SX4004
Ampere Rating	100	200	400
Operating voltage	600	600	600
Max Horsepower Rating / Max Motor FLA Current Three-Phase			
208 V	25 / 78.5	50 / 150	100 / 286
240 V	30 / 80	79 / 192	125 / 312
480 V	75 / 96	150 / 180	250 / 302
600 V	100 / 99	200 / 192	350 / 336
DC 125 V	10 / 76 ⁽¹⁾	15 / 55 ⁽¹⁾	20 / 148 ⁽¹⁾
DC 250 V	15 / 55 ⁽²⁾	15 / 55 ⁽²⁾	50 / 173 ⁽²⁾
Short circuit rating with fuses (SCCR) kA	200	200	200
Branch circuit fuse type	J	J	J
Max fuse rating (A)	100	200	400
Dimension 3-Pole (front operated switches)			
H (in)	6.3	6.3	10.2
W (in)	7.1	7.1	9.05
D (in)	3.72	3.72	4.92
Shaft Size Square (front operated switches)			
in	0.4 x 0.4	0.4 x 0.4	0.4 x 0.4
mm	10 x 10	10 x 10	10 x 10
3-pole switch operating torque (front operation) (lb in)	88	88	130
Terminal lugs kit (# lugs per kit)	Optional (6)	Optional (6)	Optional (6)
Wire range AWG (# wire holes per lug)	300 kcmil-#6 (1)	300 kcmil-#6 (1)	250 kcmil-1/0 (2)
Wire tightening torque (lb in)	275 max	275 max	375 max

(1) 2-pole in series. (2) 3-pole in series.

Catalog Numbers - IEC 947-3

Catalog Numbers		SX1003 / SX1004	SX2003 / SX2004	SX4003 / SX4004
Ampere Rating	A	100	200	400
Rated Insulation voltage Ui (V)	V	1000	1000	1000
Rated impulse voltage (Uimp)	kV	12	12	12
Operation Current Ie (A)				
400 V AC	AC-22A	100	200	400
	AC-23A	100	200	400
690 V AC	AC-22A	100	200	400
	AC-23A	100	200	315
Motor Power (kW)				
400 V AC	AC-23A	51	100	220
500 V AC	AC-23A	63	140	220
690	AC-23A	90	185	295
Max.peak let through current (gG)	kA peak	17.6	32	40
Connection				
Minimum Cu cable section	mm ²	25	50	185
Minimum Cu bubar section	mm ²	-	-	-

Non-Fused Load Break Switches SXDC

Technical Characteristics - SXDC

Catalog Numbers - UL, cUL and CSA

UL, cUL, and CSA	Catalog Numbers		
	SXDC1003, SXDC1004	SXDC2003, SXDC2004	SXDC4003, SXDC4004
Ampere Rating	100	200	400
Operating Voltage - 3P in series	600V DC	600V DC	600V DC
Prospective short-circuit current (rms) with fuses	20kA	20kA	20kA
Type of Fuse	A70P100	A70P200	LDC
Fuse Rating	100	200	400
Dimensions 3-pole			
Height (without shrouds) (in)	6.3	6.3	10.2
Width (in)	7.1	7.1	9.05
Depth (in)	3.7	3.7	4.9
Shaft size (mm)	10 x 10	10 x 10	10 x 10
3-pole switch operating torque (front operation) (lb in)	88	88	130
Terminal lugs kit (# lugs per kit)	Optional (6)	Optional (6)	Optional (6)
Wire range AWG (# wire holes per lug)	300 kcmil-#6 (1)	300 kcmil-#6 (1)	250 kcmil-1/0 (2)
Wire tightening torque (lb in)	275 max	275 max	375 max
Auxiliary Contacts	A300	A300	A300

Catalog Numbers - IEC 60947-3, DC-22B

IEC 60947-3, DC-22B	Catalog Numbers		
	SXDC1003, SXDC1004	SXDC2003, SXDC2004	SXDC4003, SXDC4004
Ampere Rating	160	250	400
Operating Voltage - 3P in series	750V DC	750V DC	750V DC
Operating Voltage - 4P in series	1,000V DC	1,000V DC	1,000V DC

Non-Fused Load Break Switches sc

Technical Characteristics for Front and Side Operation - SC

Catalog Numbers - UL, cUL and CSA

Catalog Numbers	SC600 / SC6004	SC800 / SC8004	SC1000 / SC10004	SC1200 / SC12004
Ampere Rating (A)	600	800	1000	1200
Operating voltage (V)	600	600	600	600
Max Horsepower Rating / Max Motor FLA Current Three-Phase				
208 V	150 / 415	200 / 554	200 / 554	200 / 554
240 V	200 / 480	200 / 602	200 / 602	200 / 602
480 V	400 / 447	500 / 590	500 / 590	500 / 590
600 V	350 / 336	500 / 472	500 / 472	500 / 472
DC 125 V	20 / 148 ⁽¹⁾	-	-	-
DC 250 V	50 / 173 ⁽²⁾	-	-	-
Short circuit rating with fuses (SCCR) (kA)	200	100	100	100
Branch circuit fuse type	J	L	L	L
Max fuse rating (A)	600	800	1000	1200
Dimension 3-Pole (front operated switches)				
H (in)	12.60	13	13	13
W (in)	11.02	14.64	14.64	14.64
D (in)	5.51	5.51	5.51	5.51
Shaft Size Square (front operated switches)				
in.	0.59 x 0.59	0.59 x 0.59	0.59 x 0.59	0.59 x 0.59
mm	15 x 15	15 x 15	15 x 15	15 x 15
3-pole switch operating torque (front operation) (lb in)	320	320	320	320
Terminal lugs kit (# lugs per kit)	optional (6)	optional (6)	optional (12)	optional (12)
Wire range AWG (# wire holes per lug)	600 kcmil-#2 (2)	600 kcmil-#2 (3)	600 kcmil-#2 (4)	600 kcmil-#2 (4)
Wire tightening torque (lb in)	375	375	375	375

(1) 2-pole in series. (2) 3-pole in series.

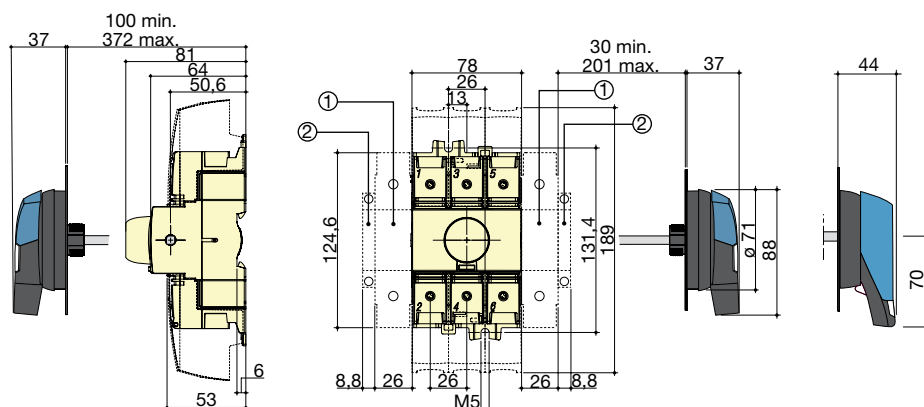
Catalog Numbers - IEC 947-3

Catalog Numbers		SC600 / SC6004	SC800 / SC8004	SC1000 / SC10004	SC1200 / SC12004
Ampere Rating	A	600	800	1000	1200
Rated Insulation voltage Ui	V	1000	1000	1000	1000
Rated impulse voltage (Uimp)	kV	12	12	12	12
Operation current Ie (A)					
400 V AC	AC-22A	630	800	1000	1200
	AC-23A	630	800	1000	1000
690 V AC	AC-22A	500	630	630	630
	AC-23A	200	400	400	400
Motor Power (kW)					
400 V AC	AC-23A	355	450	560	560
500 V AC	AC-23A	450	560	560	560
690 V AC	AC-23A	185	400	400	400
Max. peak let through current (gG)	kA peak	48	75	75	75
Connection					
Minimum Cu cable section	mm ²	2 x 150	2 x 185	2 x 240	-
Minimum CU busbar section	mm ²	2 x 30 x 5	2 x 40 x 5	2 x 50 x 5	2 x 60 x 5

Non-Fused Load Break Switches FSSC, SX, SXDC

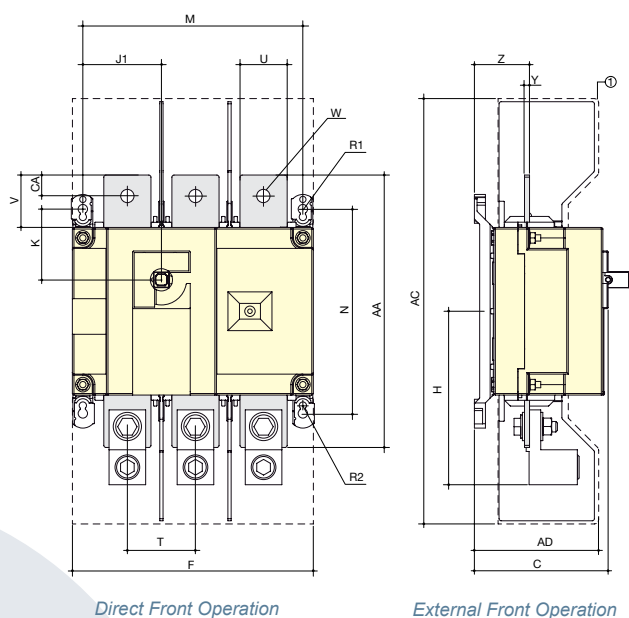
Dimensions (in/mm) for Front and Side Operation

FSSC 30 to 100A



SX and SXDC 100 to 400A

Ampere Rating (A)	Overall dimen.	Terminal shrouds		Switch body						Switch mounting					Connection terminal									
	C	AC	AD	F 3p.	F 4p.	H	J1 3p.	J1 4p.	K	M 3p.	M 4p.	N	R1	R2	T	U	V	W	Y	Z	AA	CA		
100 - 200	3.72 in	10.1	3.05	7.09	9.06	4.22	2.17	4.13	1.8	6.3	8.27	5.31	0.35	0.27	1.97	0.98	1.18	0.43	0.14	1.35	6.3	0.6		
100 - 200	94.6 mm	256	77.5	180	230	107	55	105	45.6	160	210	135	9	7	50	25	30	11	3.5	34.4	160	15		
400	4.92 in	16	4.51	9.05	11.4	6.53	2.95	5.31	2.65	8.26	10.6	7.6	0.35	0.27	2.56	1.77	1.97	0.43	0.2	2.08	10.2	0.8		
400	128 mm	406	115	230	290	166	75	135	67.5	210	270	195	9	7	65	45	50	13	5	53	260	20		

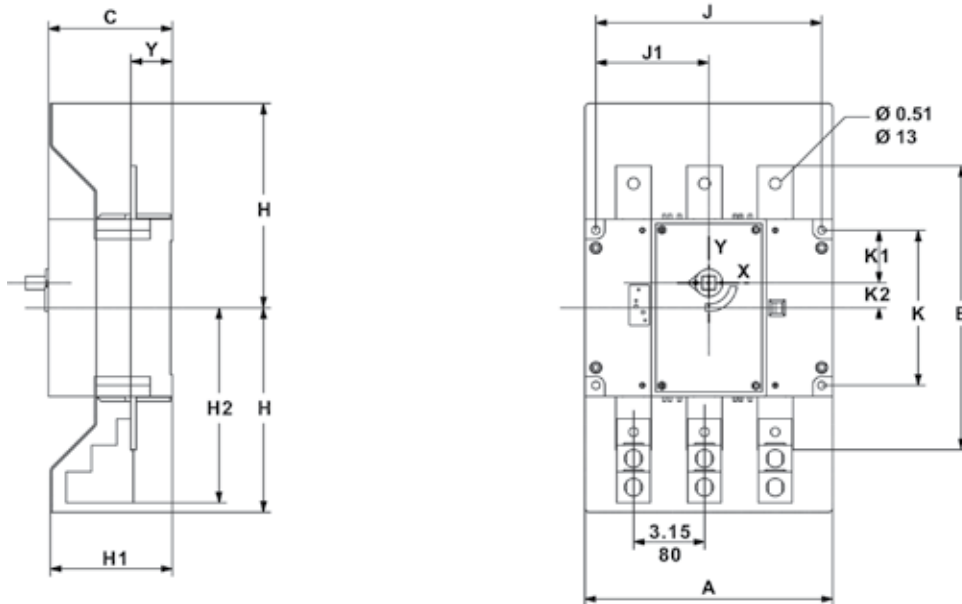


Non-Fused Load Break Switches sc

Dimensions (in/mm) for Front Operation - SC

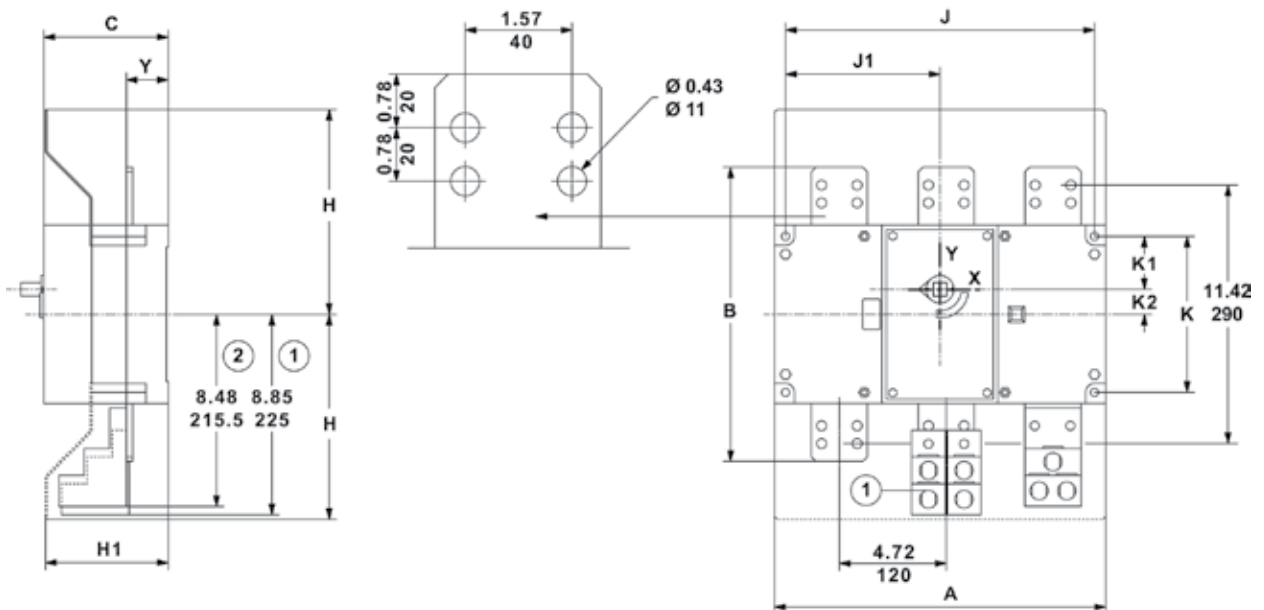
600 A

SC600
SC6004



800-1000-1200 A

SC800
SC8004
SC1000
SC10004
SC1200
SC12004



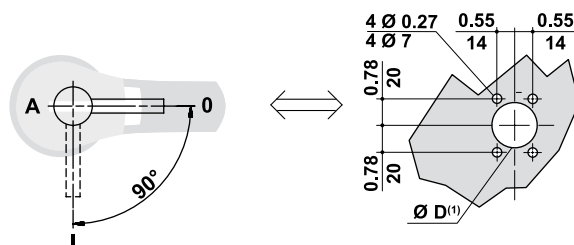
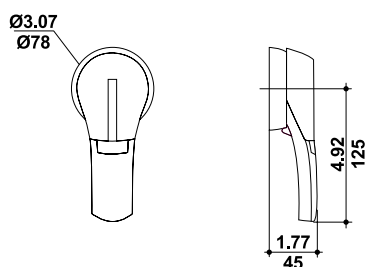
Ampere Rating	No. of Poles	A		B		C		H		H1		H2		J		J1		K		K1		K2		Y	
		In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
400 A	3 P	11.02	280	12.60	320	5.51	140	9.05	230	5.43	138	8.66	220	10.04	255	5	127.5	6.88	175	2.34	59.5	1.10	28	1.85	47
600 A	4 P	14.17	360	12.60	320	5.51	140	9.05	230	5.43	138	8.66	220	13.19	335	6.59	167.5	6.88	175	2.34	59.5	1.10	28	1.85	47
800 A - 1000 A	3 P	14.64	372	13	330	5.51	140	9.05	230	5.43	138	-	-	13.66	347	6.83	173.5	6.88	175	2.34	59.5	1.10	28	1.85	47
1200 A	4 P	19.37	492	13	330	5.51	140	9.05	230	5.43	138	-	-	18.38	467	9.19	233.5	6.88	175	2.34	59.5	1.10	28	1.85	47

Non-Fused Load Break Switches FSSC, SX, SXDC, SC

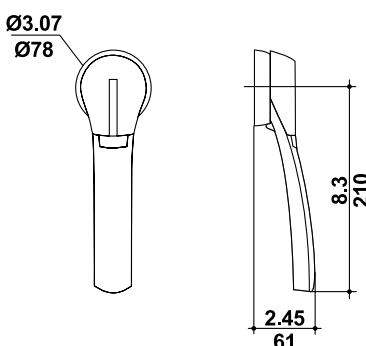
Dimensions (in/mm) for External Front Operation Handles

S type pistol handle

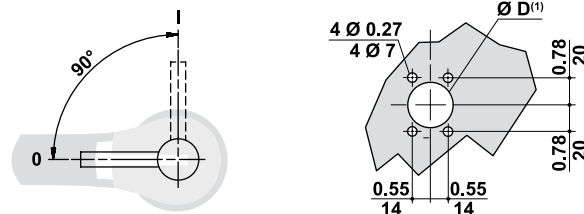
HSPBL
HSPRL
HSPB4L
HSPR4L



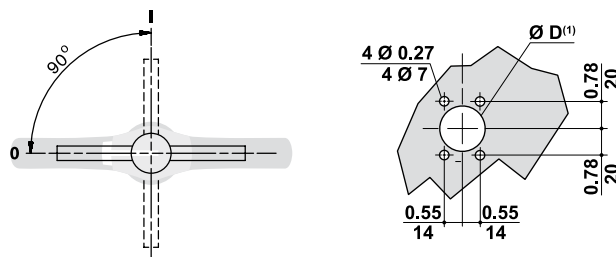
HSPBEL
HSPREL
HSPB4EL
HSPR4EL



Side operation

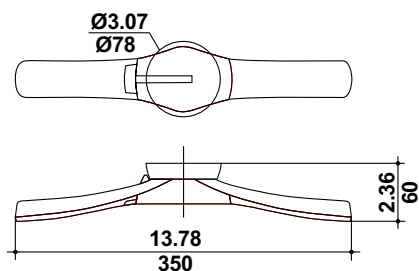


Front operation



S type pistol double handle

HSTB4
HSTR4

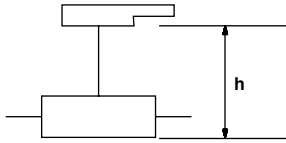


- (1) Conventional fixing (from rear): $D = 1.22$ to 1.45 in / 31 to 37 mm.
Fast fixing (external, door closed): $D = 1.45$ in / 37 mm, fast fixing is achieved with special clips that avoid drilling for fixation of the handle on the door. Clips are included.

Non-Fused Load Break Switches FSSC, SX, SXDC, SC

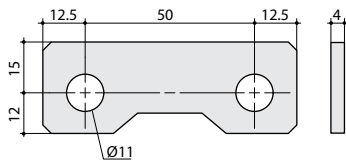
Dimensions (in/mm) from Backplate to Door Distance with Shaft Extension - FSSC, SX, SC

Minimum distance (in / mm)

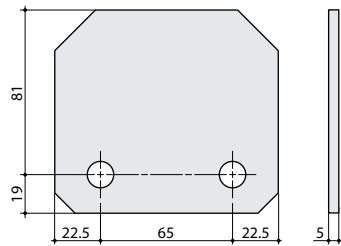


H & C Minimum Dimension	All HSP Handles	
	In	mm
FSSC	6	153
SX 100-200A	6	152
SX 400A	8	203
SC 600-1200 A	8.70	221

Jumper Bars - SXDC



100A and 200A #SX2J

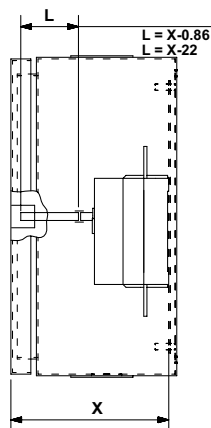
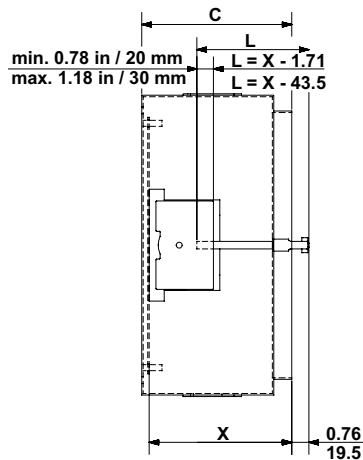


400A and 200A #SX4J

Note: Large size is for heat dissipation.

SX4003
SX4004
SXDC4003
SXDC4004

SC600 SC1000
SC6004 SC10004
SC800 SC1200
SC8004 SC12004

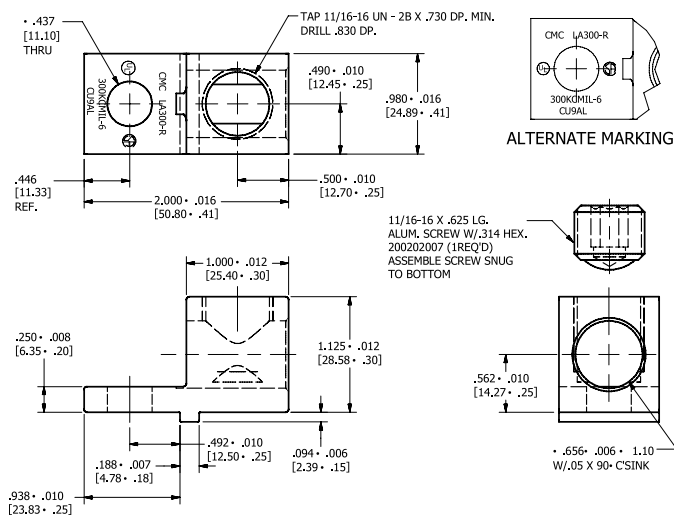


Non-Fused Load Break Switches SX, SXDC, SC

Dimensions (in/mm) for Terminal Lugs

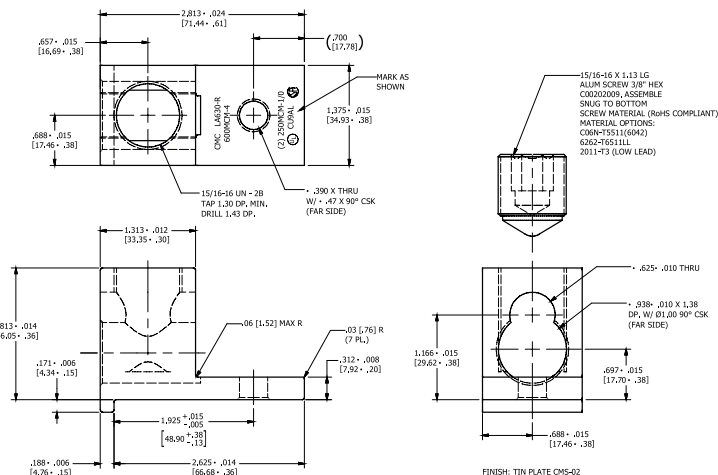
For use with SX series switches

TL200X



1 wire 300kcmil / 0 - #6

TL400X

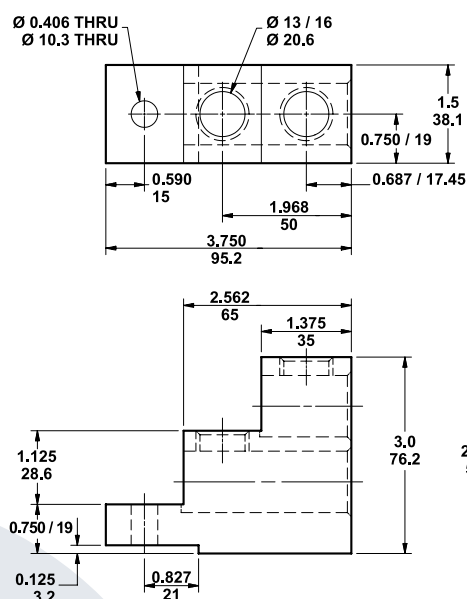


2 wire 250kcmil - 1/0

TL600 and TL1200

TL600: For use with SC 600 (1 lug per terminal)

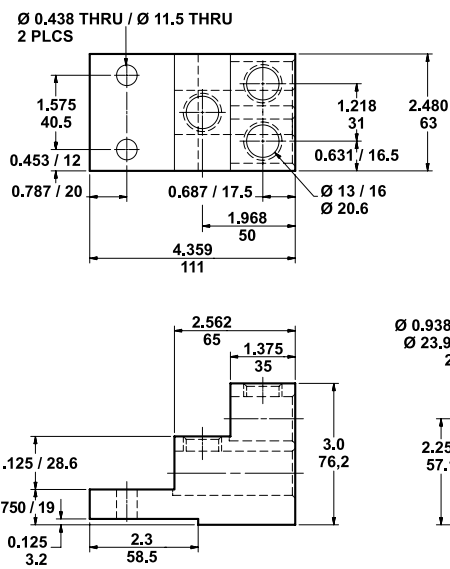
TL1200: For use with SC 800, 1000 & 1200 (2 lugs per terminal)



2 wires 600 MCM-2

TL 800

For use with SC 800



3 wires 600 MCM-2

Fusible Disconnect Switches FB Series

UL 98 Fusible Disconnect Switches

Mersen FB Series disconnect switches are extremely durable, manually operated, fusible disconnect switches. They employ double break contacts per pole that ensure complete isolation of the fuse when the switch is in the OFF position. With safety in mind, all fusible disconnect switches are supplied with fuse covers and line side shrouding as a standard feature. These switches provide the ultimate in short circuit protection when used with Mersen's Class CC, J or L fuses. These heavy-duty switches are designed with the most up-to-date disconnect fuse and switch technology available. Designed to meet the UL98 or UL489 standard, the fusible disconnect switch gives you the product that "makes and breaks" power circuits under load. They have been tested and approved for use in the most demanding applications, such as "Service Entrance." The optional TEST function (up to 400 A) enables testing of the control circuit auxiliaries without switching the main contacts. This function provides a simple alternative to a separately wired push button. A wide array of handles are available to meet OSHA padlocking requirements, NEMA configurations, defeater options and NFPA 79 requirements.

Highlights:

- Double break contact per pole up to 800 A
- Touch safe covers protect fuse terminals
- Service entrance rated
- Compact footprints
- Front and side operated switches with snap-on auxiliary contact feature
- 14AWG power taps on both line and load sides for control power transformers or surge protection
- External or direct operation handles
- Defeatable pistol handles automatically re-latch when panel door is closed - no tool necessary to reset latch
- Test positions available up to 400A
- Padlocking feature as standard on modular switchgear boxes
- Modular switch configurations, special executions on request (5-pole, mix ratings...)
- Padlockable handle
- Flange-mounted actuators

Applications:

- Service entrance or main panel disconnects up to 600 VAC, 800 A
- "Make and break" power circuit applications on load
- Fusible isolation switches
- NFPA 79 solutions

Recommended fuse usage:

- FBCC — use with ATDR*, ATMR, ATQR
- FBJ — use with AJT, A4J, HSJ
- FBL — use with A4BQ, A4BY, A4BT

** Recommended for DC application*



Ratings:

- Volts** : 600VAC, 250VDC
- Amps** : 30, 60, 100, 200, 400, 600, and 800A
- SCCR** : Up to 200kA with Class CC, J, or L Fuses

Approvals:

- All Fusible Disconnect Switch switches meet UL & CSA requirements
- UL listed guide WHTY, File E191605 for UL 98 (ratings from 30 A to 800 A)
- UL listed guide WJAZ, File E258428 for UL489 (for 30 A CDT)
- CSA 22.2 # 4, class 4652-04, File 703166 (ratings from 30 A to 800 A)
- CSA 22.2 # 5, class 4652-06, File 703166 (for 30 A CDT)
- IEC 947-3 CE mark



Fusible Disconnect Switches FB Series

Front and Side Operated Range from 30 to 60A



Select a switch

Ampere Rating	Catalog Numbers			
	30	30	30	60
2-Pole			FBJ302X	FBJ602X
3-Pole	FBCC30CDT	FBJ30CDT	FBJ303X	FBJ603X
4-Pole	FBCC30SNC DT	FBJ30SNC DT	FBJ304X	FBJ604X
Fuse class	CC	J	J	J

Selector handle for external front operation



Select a handle



NEMA Type	IEC	Test Function	Color	Catalog Numbers			
1, 3R, 12	IP54	No	Black	HSPB	HSPB	HSPBL	HSPBL
1, 3R, 12	IP54	No	Red / Yellow	HSPR	HSPR	HSPRL	HSPRL
1, 3R, 12, 4, 4X	IP65	No	Black	HSPB4	HSPB4	HSPB4L	HSPB4L
1, 3R, 12, 4, 4X	IP65	No	Red / Yellow	HSPR4	HSPR4	HSPR4L	HSPR4L
1, 3R, 12, 4, 4X	IP65	Yes	Black	HSPB4T	HSPB4T	HSPB4LT	HSPB4LT
1, 3R, 12, 4, 4X	IP65	Yes	Red / Yellow	HSPR4T	HSPR4T	HSPR4LT	HSPR4LT

Note: handle is defeatable, and is padlockable in the "OFF" position.

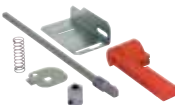


Select a shaft

Shaft Length (in/mm)	Catalog Numbers			
7.9 / 200	SS200-5	SS200-5	SS200-10	SS200-10
12.6 / 320	SS320-5	SS320-5	SS320-10	SS320-10
15.7 / 400	SS400-5	SS400-5	SS400-10	SS400-10
19.7 / 500	-	-	SS500-10*	SS500-10*

* Not UL

NFPA 79 Front Operation Kit



Select a kit

NFPA 79 Front Operation Kit	Catalog Numbers			
	HADB6	HADB6	NFPA791	NFPA791

Note: allows to operate & padlock the switch when door of enclosure is open. For full information on NFPA79 requirements and on our solution, please consult P42 of this Advisor Catalog.

Options for external front and side operation



	Catalog Numbers			
	integral	integral	integral	integral
Terminal Lugs Kit (for 2, 3 and 4 pole switches)	integral	integral	integral	integral
Terminal Shrouds (for 2, 3 and 4 pole switches)	integral	integral	integral	integral
Shorting Links Kit (3 links per Kit)	CCNL30	JNL30	JNL30	SL60
Direct Front Operation Handle	HADB1	HADB2	3629 7910	3629 7910
Auxiliary contact				
Auxiliary contact block holder	ACHCD	ACHCD	-	-
1 N / O, 10A, 600VAC snap-on contact block, A600-Q600 ⁽¹⁾	AC3	AC3	AC3	AC3
1 N / C, 10A, 600VAC snap-on contact block, A600-Q600 ⁽¹⁾	AC4	AC4	AC4	AC4
1 NO + NC side mount contact block, A600-N600 ⁽²⁾	-	AC5	AC5	AC5
2 NO + NC side mount contact blocks, A600-N600 ⁽²⁾	-	AC6	AC6	AC6

(1) Compact Design Fusible Disconnect Switch accommodates up to 4 auxiliary contacts for FBCC30CDT and FBCC30SNC DT and up to 2 auxiliary contacts for FBJ30CDT and FBJ30SNC DT on the switch.

(2) Two auxiliary contact blocks maximum can be side mounted.

Note : For class T fuse adaptors, please consult us.

For the most current product performance data visit ep-us.mersen.com and use catalog search.

Fusible Disconnect Switches FB Series

Front and side operated range from 100 to 800A



Select a switch

Ampere Rating	Catalog Numbers				
	100	200	400	600	800
2-Pole	FBJ1002X	FBJ2002X	-	-	-
3-Pole	FBJ1003X	FBJ2003X	FBJ400U	FBJ600U	FBL800U
4-Pole	FBJ1004X	FBJ2004X	FBJ4004U	FBJ6004U	FBL8004U
Fuse class	J	J	J	J	L

S type pistol handle for external front and side operation



Select a handle

NEMA Type	IEC	Test Function	Color	Catalog Numbers				
1, 3R, 12	IP54	No	Black	HSPBL	HSPBL	HSPBL	HSPBEL	HSPBEL
1, 3R, 12	IP54	No	Red / Yellow	HSPRL	HSPRL	HSPRL	HSPREL	HSPREL
1, 3R, 12, 4, 4X	IP65	No	Black	HSPB4L	HSPB4L	HSPB4L	HSPB4EL	HSPB4EL
1, 3R, 12, 4, 4X	IP65	No	Red / Yellow	HSPR4L	HSPR4L	HSPR4L	HSPR4EL	HSPR4EL
1, 3R, 12, 4, 4X	IP65	Yes	Black	HSPB4LT	HSPB4LT	HSPB4LT	HSTB4†	HSTB4†
1, 3R, 12, 4, 4X	IP65	Yes	Red / Yellow	HSPR4LT	HSPR4LT	HSPR4LT	HSTR4†	HSTR4†

Note: Handle is defeatable, and is padlockable in the "OFF" position.

† T-bar type handle. No test function.

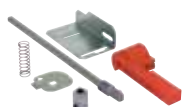


Select a shaft

Shaft Length (inches / mm)	Catalog Numbers				
7.9 / 200	SS200-10	SS200-10	SS200-10	SS200-12	SS200-12
12.6 / 320	SS320-10	SS320-10	SS320-10	SS320-12	SS320-12
15.7 / 400	SS400-10	SS400-10	SS400-10	SS400-12	SS400-12
19.7 / 500	SS500-10*	SS500-10*	SS500-10*	SS500-12*	SS500-12*

* Not UL

NFPA 79 Front Operation Kit



Select a kit

NFPA 79 Front Operation Kit	Catalog Numbers				
	NFPA791	NFPA791	NFPA791	NFPA792	NFPA792

Note: allows to operate & padlock the switch when door of enclosure is open. For full information on NFPA79 requirements and on our solution, please consult P42 of this Advisor Catalog.

Options for external front and side operation



Pistol Handle for Direct Front Operation	Catalog Numbers				
	3629 7910	3629 7910	3629 7910	HADBSU	HADBSU
Terminal Lugs Kit					
4 lugs per kit - for 2 pole switches	Intergral	TL200X4	-	-	-
6 lugs per kit - for 3 pole switches	Intergral	TL200X6	TL400	TL600	TL600
8 lugs per kit - for 4 pole switches	Intergral	TL200X8	TL4004	TL6004	TL6004
Terminal shrouds kit(1)					
2-pole (for line or load side)	Intergral	TS2002FBX	-	-	-
3-pole (for line or load side)	Intergral	TS2003FBX	TS400FB(2)	TS800U	TS800U
4-pole (for line or load side)	Intergral	TS2004FBX	TS4004FB(2)	TS8004U	TS8004U
Shorting links kit (3 links per kit)	SL100	SL200	SL400	SL800	SL800
Auxiliary contacts					
1 N/O, 10A, 600 VAC snap-on-contact block, A600-Q600	AC3	AC3	AC3	AC3	AC3
1 N/C, 10A, 600 VAC snap-on-contact block, A600-Q600	AC4	AC4	AC4	AC4	AC4
1 NO+NC side mount contact block, A600-N600(3)	AC5	AC5	AC5	AC5	AC5
2 NO+NC side mount contact blocks, A600-N600(3)	AC6	AC6	AC6	AC6	AC6

(1) Line side shrouding supplied as standard with switch.

(2) As a replacement part for line or load side (two terminal screens supplied as standard with switch).

(3) Two auxiliary contact blocks maximum can be side mounted.

Note: for class T fuse adaptors, please consult Mersen.

Mersen

Fusible Disconnect Switches FB Series

Flange Operated Range from 30 to 400A

Select a switch	Ampere Rating	Catalog Numbers				
		30	60	100	200	400
	2-Pole	FBJ302SOX	FBJ602SOX	FBJ1002SOX	-	-
	3-Pole	FBJ303SOX	FBJ603SOX	FBJ1003SOX	FBJ200SO	FBJ400SO
	4-Pole	FBJ304SOX	FBJ604SOX	FBJ1004SOX	FBJ2004SO	FBJ4004SO
	Fuse class	J	J	J	J	J

Cable flange operated handle (square D type - class 9422)



Select a handle

NEMA Type	IEC	Catalog Numbers				
1, 3R, 12	IP54	HAF-OP1 ⁽¹⁾	HAF-OP1 ⁽¹⁾	HAF-OP1 ⁽¹⁾	HAF-OP1 ⁽¹⁾	HAF-OP1 ⁽¹⁾
4, 4X	IP65	HAF-OP2 ⁽²⁾	HAF-OP2 ⁽²⁾	HAF-OP2 ⁽²⁾	HAF-OP2 ⁽²⁾	HAF-OP2 ⁽²⁾

Note: Handle is defeatable, and padlockable in the “OFF” position.



Mechanism

Mechanism	HAF-MECH	HAF-MECH	HAF-MECH	HAF-MECH	HAF-MECH
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Select a cable

Cable Length (inches / mm)	
36 / 914.4	HAFC36
60 / 1,524	HAFC60
120 / 3,048	HAFC120

Note: Cable flange operation is for enclosure depth from 5.75"/145mm to 36"/990mm, depending on the cable length.

Rod flange operated handle (square D type - class 9422)



Select a handle

NEMA Type	IEC	Catalog Numbers				
1, 3, 3R	IP54	HAF-OP1 ⁽¹⁾	HAF-OP1 ⁽¹⁾	HAF-OP1 ⁽¹⁾	HAF-OP1 ⁽¹⁾	HAF-OP1 ⁽¹⁾
4, 4X	IP65	HAF-OP2 ⁽²⁾	HAF-OP2 ⁽²⁾	HAF-OP2 ⁽²⁾	HAF-OP2 ⁽²⁾	HAF-OP2 ⁽²⁾

Note: handle is defeatable, and padlockable in the "OFF" position.



Select a rod

Rod Length (inches / mm)		HAFR	HAFR	HAFR	HAFR	HAFR
23.6 / 500						

Note: Rod kit is for enclosure depth from 8 / 203 to 24.12 / 613 For smaller depth, please consult us.

Options for flange & direct operation handle from 30 to 400 A

Terminal lugs kit	Catalog Numbers				
	6 lugs per kit - for 2 pole fuse switches	Integral	Integral	Integral	TL200X4 TL400
6 lugs per kit - for 3 pole fuse switches	Integral	Integral	Integral	TL200X6	TL400
8 lugs per kit - for 4 pole fuse switches	Integral	Integral	Integral	TL200X8	TL4004
Terminal shrouds kit					
2-pole (for line or load side)	Integral	Integral	Integral	-	-
3-pole (for line or load side)	Integral	Integral	Integral	TS200FB ⁽⁵⁾	TS400FB ⁽⁴⁾
4-pole terminal shrouds kit (for line or load side)	Integral	Integral	Integral	TS2004FB ⁽⁵⁾	TS4004FB ⁽⁴⁾
Shorting links kit (3 links per kit - for 3 pole fuse switches)	NLJ30	SL60	SL100	SL200	SL400
Auxiliary contacts ⁽³⁾					
1 NO+NC side mount contact block, A600 - N600	AC5	AC5	AC5	AC5	AC5
2 NO+NC side mount contact blocks, A600 - N600	AC6	AC6	AC6	AC6	AC6

(1) All external metal parts are sheet steel.

(2) All external metal parts are either stainless steel or a chrome-plated non-ferrous die casting.

(3) Two auxiliary contact blocks maximum can be side mounted.

(4) As a replacement part (two terminal screens supplied as standard with switch). Note: for class T fuse adaptors, please consult us.

(5) Line side shrouding supplied as standard with the switch.

Fusible Disconnect Switches FB Series

Technical Characteristics for Front and Side Operation

Catalog Numbers - UL, cUL and CSA

Catalog Numbers	FBCC30CDT / FBCC30SNCDT	FBJ30CDT / FBJ30SNCDT	FBJ302X / FBJ303X / FBJ304X
Ampere Rating (A)	30	30	30
Fuse type	CC	J	J
Operating voltage (V)	600	600	600
Max Horsepower Rating / Max Motor FLA Current Three-Phase			
208 V	5 / 17.5	5 / 17.5	5 / 17.5
240 V	7.5 / 22	7.5 / 22	7.5 / 22
480 V	15 / 21	15 / 21	15 / 21
600 V	20 / 22	20 / 22	20 / 22
DC 125 V - 2-pole in series	3 / 25	3 / 25	3 / 25
DC 250 V - 3-pole in series	5 / 20	5 / 20	5 / 20
Max Horsepower Rating / Max Motor FLA Current Single-Phase			
240 V AC	-	-	3 / 17
480 V AC	-	-	7.5 / 21
Short Circuit Rating			
Short circuit rating with fuses (SCCR) (kA)	100	100	200
Branch circuit fuse type	CC	J	J
Max fuse rating (A)	30	30	30
Dimension 3-pole			
H (in)	4.56	4.56	5.35
W (in)	3.78	4.13	5.88
D (in)	3.28	3.89	4.84
Shaft size square			
in	0.2 x 0.2	0.2 x 0.2	0.4 x 0.4
mm	5 x 5	5 x 5	10 x 10
3-pole switch operating torque (front operation) (lb in)	21	21	88
Terminal lugs kit (# of lugs per kit)	Integral	Integral	Integral
Wire range AWG (# of wire holes per lug)	#10-#14 (1)	#10-#14 (1)	#6-#10 (1)
Wire tightening torque	27	27	58

Fusible Disconnect Switches FB Series

Technical Characteristics for Front and Side Operation

Catalog Numbers - UL, cUL and CSA

Catalog Numbers	FBJ602X FBJ603X FBJ604X	FBJ1002X FBJ1003X FBJ1004X	FBJ2002X FBJ2003X FBJ2004X	FBJ400U FBJ4004U	FBJ600U FBJ6004U	FBL800U FBL8004U
Ampere Rating (A)	60	100	200	400	600	800
Fuse type	J	J	J	J	J	L
Operating voltage (V)	600	600	600	600	600	600
Max Horsepower Rating / Max Motor FLA Current Three-Phase						
208 V	15 / 48.5	25 / 78.5	50 / 150	100 / 286	-	-
240 V	15 / 42	30 / 80	60 / 154	125 / 312	200 / 480	200 / 480
480 V	30 / 40	60 / 77	125 / 156	250 / 302	400 / 477	500 / 590
600 V	50 / 52	75 / 77	150 / 144	350 / 336	500 / 472	500 / 472
DC 125 V - 2-pole in series	3 / 25	7.5 / 58	-	20 / 148	-	-
DC 250 V - 3-pole in series	10 / 38	20 / 38	-	50 / 173	-	-
Max Horsepower Rating / Max Motor FLA Current Single-Phase						
240 V AC	10 / 50	10 / 50	-	-	-	-
480 V AC	10 / 26	10 / 26	-	-	-	-
Short Circuit Rating						
Short circuit rating with fuses (SCCR) (kA)	100	200	200	200	200	200
Branch circuit fuse type	J	J	J	J	J	L
Max fuse rating (A)	60	100	200	400	600	800
Dimension 3 pole (front operated switches)						
H (in)	5.35	7.32	7.72	14.31	11.86	11.86
W (in)	5.88	5.88	7.68	11.93	14.31	14.31
D (in)	4.84	4.84	5.12	5.56	11.42	11.42
Shaft size square (front operated switches)						
in	0.4 x 0.4	0.4 x 0.4	0.4 x 0.4	0.4 x 0.4	4.7 x 4.7	4.7 x 4.7
mm	10 x 10	10 x 10	10 x 10	10 x 10	12 x 12	12 x 12
3-pole switch operating torque (front operation) (lb-in)	88	88	106	132	350	350
Terminal lugs kit (# lugs per kit)	Integral	Integral	Optional (6)	Optional (6)	Optional (6)	Optional (6)
Wire range AWG (# of wire holes per lug)	#6-#10 (1)	#1-#12 (1)	300kcmil - #6 (1)	600kcmil-#2 (1)	600kcmil-#2 (2)	600kcmil-#2 (2)
Wire tightening torque (lb-in)	120	200	275 max	375	375	375

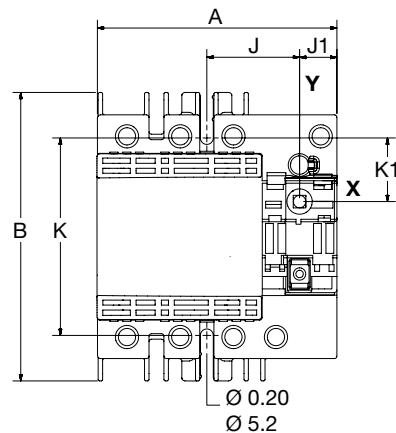
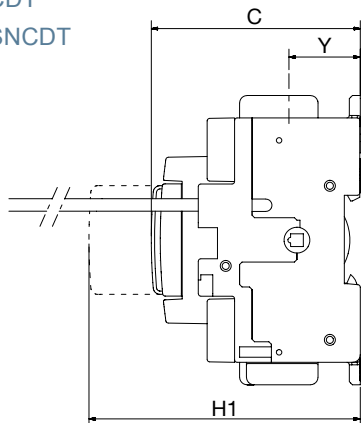
Fusible Disconnect Switches FB Series

Dimensions (in/mm) for Front and Side Operation

Fusible Disconnect Switch CD 30 A CC

FBCC30CDT

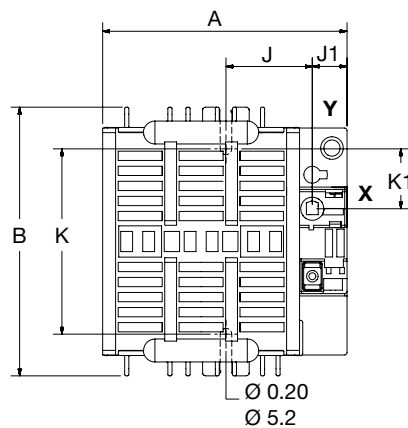
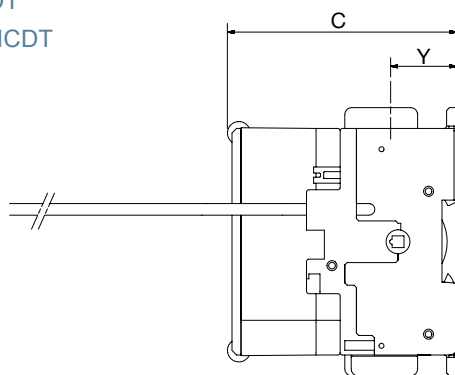
FBCC30SNCDT



Fusible Disconnect Switch CD 30 A J

FBJ30CDT

FBJ30SNCDT



Ampere Rating	Number of Poles	A		B		C		H1		H3		J		J1		K		K1		Y	
		In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
30 A CC CD type	3 P	3.78	96	4.56	116	3.28	83.5	5.19	132	-	-	1.47	37.5	0.59	15	3.3	84	1	25.5	1.12	28.5
30 A J CD type	3 P	4.13	105	4.56	116	3.89	99	-	-	-	-	1.47	37.5	0.59	15	3.30	84	1	25.5	1.12	28.5

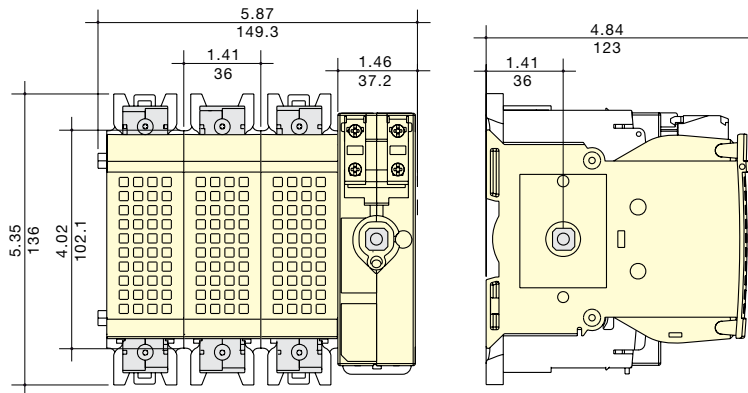
Fusible Disconnect Switches FB Series

Dimensions (in/mm)

Fusible Disconnect Switch 30A and 60A

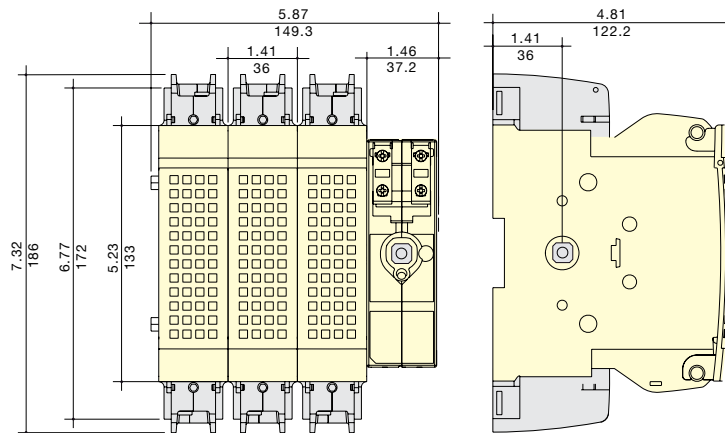
FBJ303X*

FBJ603X*



Fusible Disconnect Switch 100A

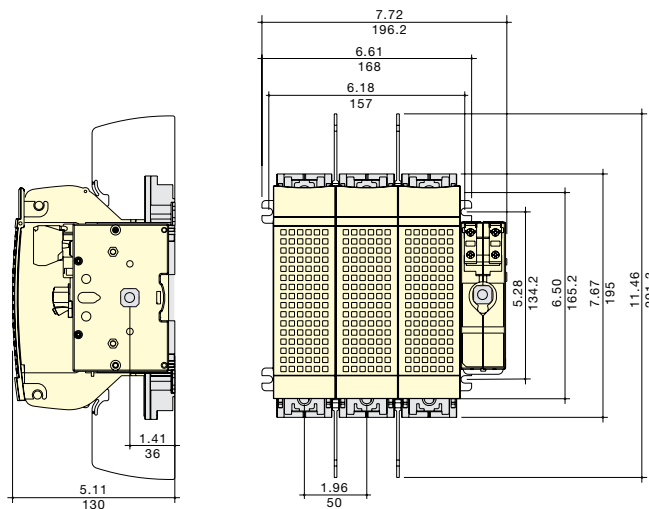
FBJ1003X*



*Note: For 4-pole or 2-Pole versions, add or subtract 1.41" / 36mm.

Fusible Disconnect Switch 200A

FBJ2003X**



**Note: For 4-pole or 2-Pole versions, add or subtract 1.96" / 50mm.

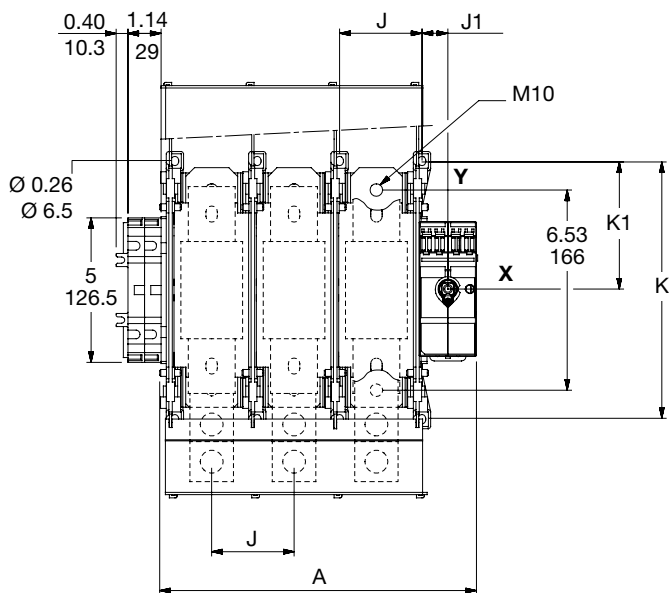
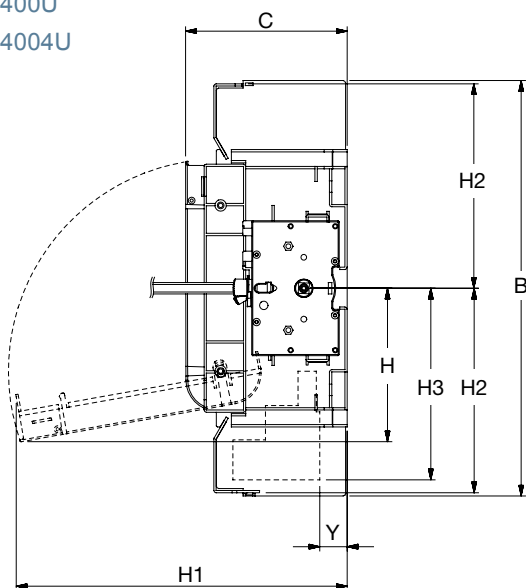
Fusible Disconnect Switches FB Series

Dimensions (in/mm) for Front and Side Operation

Fusible Disconnect Switch 400A

FBJ400U

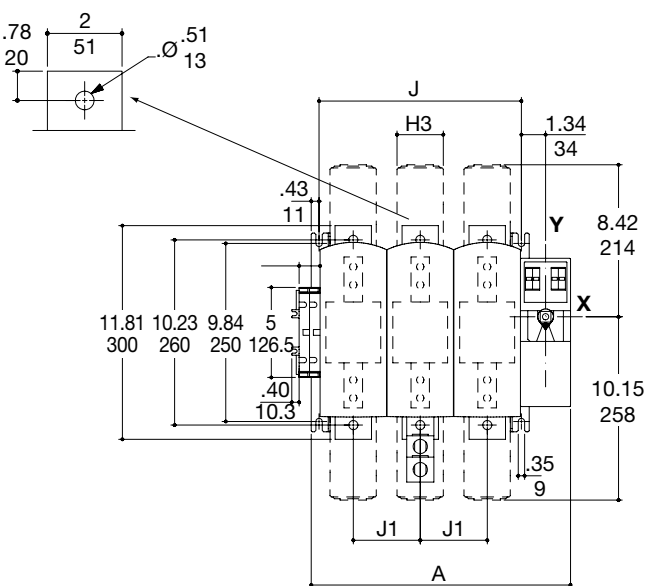
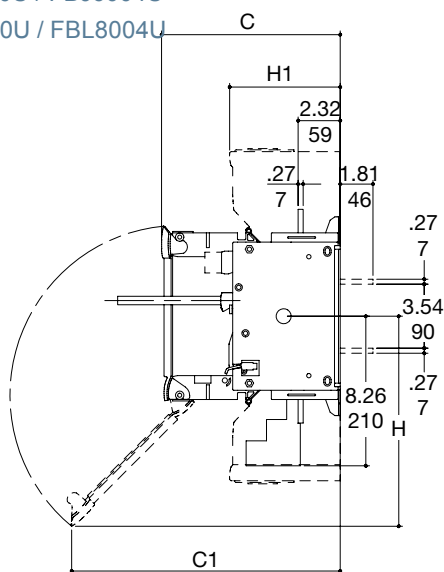
FBJ4004U



Fusible Disconnect Switch 600A - 800A

FBJ600U / FBJ6004U

FBL800U / FBL8004U



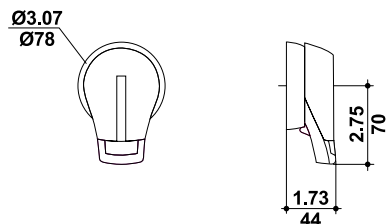
Ampere Rating	No of Poles	A		B		C		C1		H		H1		H2		H3		J		J1		K		K1		Y	
		In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
400 A	3 P	10.8	276	14.31	363.5	5.56	141.5	-	-	5.28	134.5	11.41	290	7.04	179	6.59	167.5	2.84	72	0.88	22.5	8.83	224	4.41	112	1.06	27
	4 P	13.7	348	14.31	363.5	5.56	141.5	-	-	5.28	134.5	11.41	290	7.04	179	6.59	167.5	2.84	72	0.88	22.5	8.83	224	4.41	112	1.06	27
600 A, 800 A	3 P	14.33	364	-	-	9.84	250	14.72	374	11.69	297	6.10	155	-	-	2.56	65	11.18	284	3.70	94	-	-	-	-	-	-
	4 P	18.03	458	-	-	9.84	250	14.72	374	11.69	297	6.10	155	-	-	2.56	65	14.88	378	3.70	94	-	-	-	-	-	-

Fusible Disconnect Switches FB Series

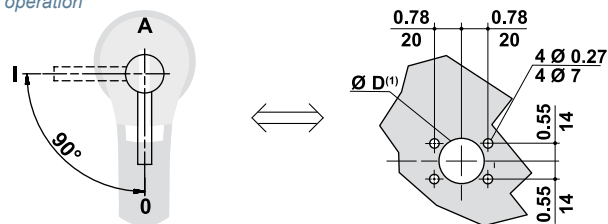
Dimensions (in/mm) for External Front Operation Handles

S type pistol handle

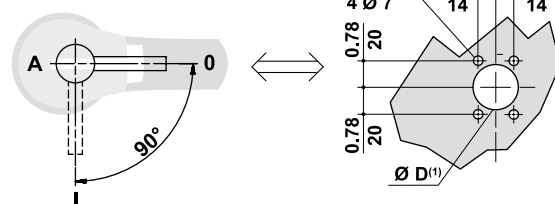
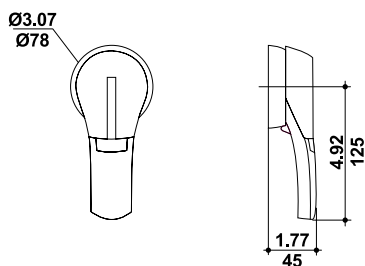
HSPB
HSPR
HSPB4
HSPR4



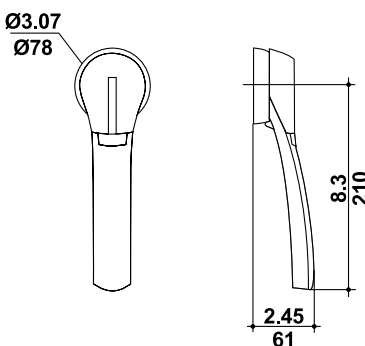
Front operation



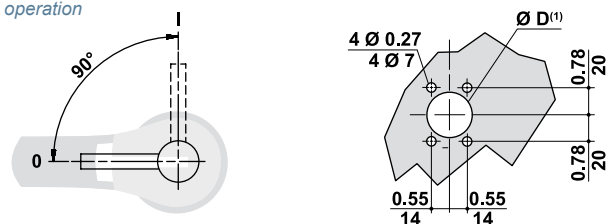
HSPBL
HSPRL
HSPB4L
HSPR4L



HSPBEL
HSPREL
HSPB4EL
HSPR4EL



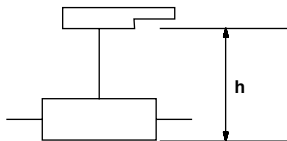
Side operation



Fusible Disconnect Switches FB Series

Dimensions (in/mm) from Backplate to Door Distance with Shaft Extension

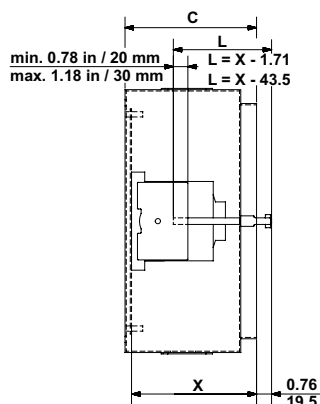
Minimum distance (in / mm)



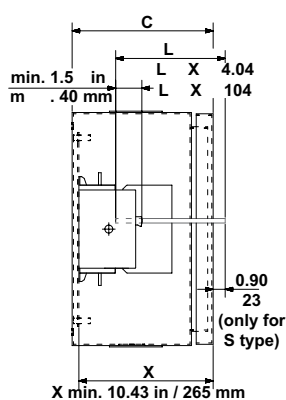
H & C Minimum Dimension	All HSP Handles	
	In	mm
Fusible Disconnect Switch CD 30 A CC	5.31	135
Fusible Disconnect Switch CD 30 A J	5.98	152
Fusible Disconnect Switch 30 A J - 60 A J	6	153
Fusible Disconnect Switch 100 A J	6	153
Fusible Disconnect Switch 200 A J	8	203.5
Fusible Disconnect Switch 400 A J	12	305
Fusible Disconnect Switch 600 A J - 800 A L	12	305

S type pistol handle

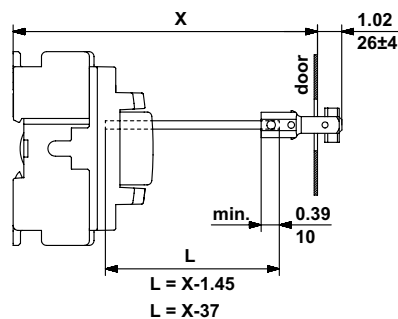
FBJ400U
FBJ4004U



FBJ600U FBJ6004U
FBL800U FBL8004U



FBCC30CDT FBCC30SNCDT
FBJ30CDT FBJ30SNCDT

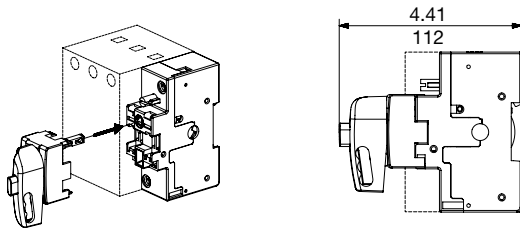


Fusible Disconnect Switches FB Series

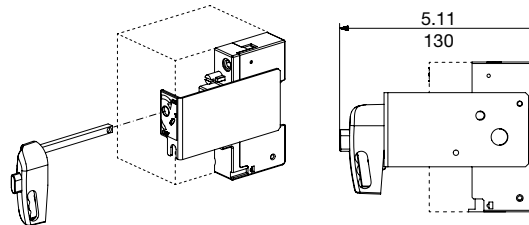
Dimensions (in / mm) for Direct Front Operation Handles

Direct pistol handle

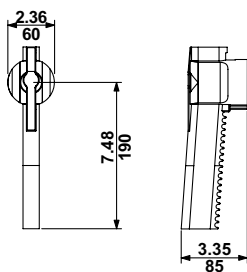
HADB1



HADB2



HADB5U

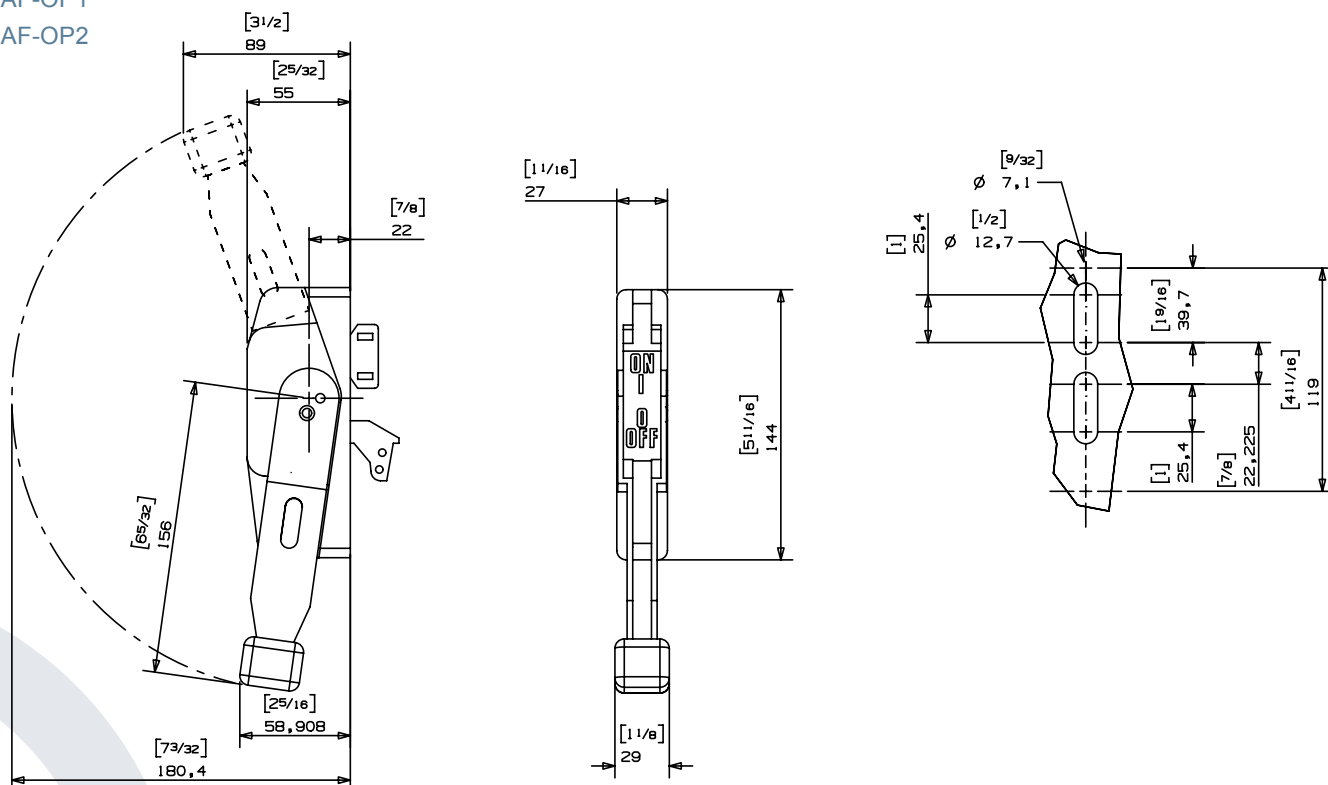


Dimensions (in / mm) for Flange Operation Handles

Square D type flange handle - class 9422 (A1 & A2)

HAF-OP1

HAF-OP2

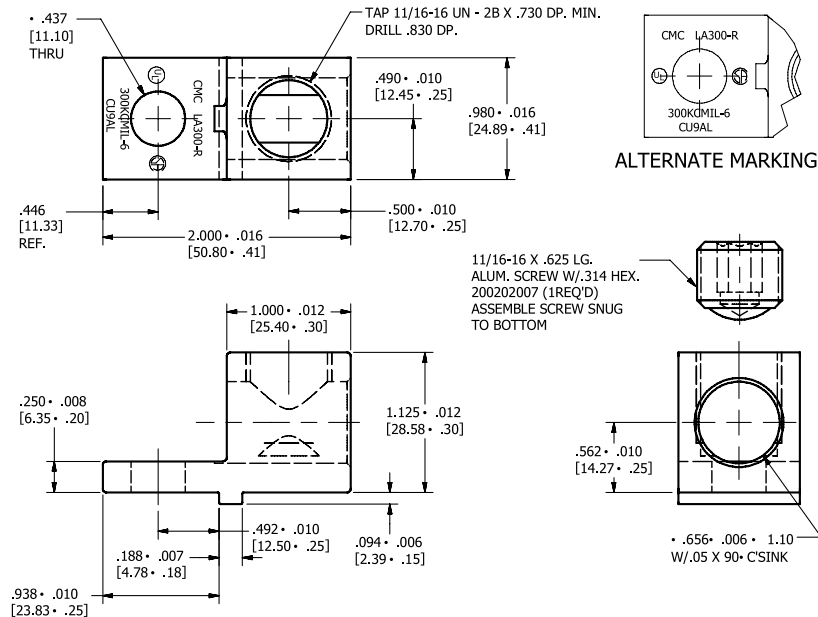


Fusible Disconnect Switches FB Series

Dimensions (in / mm) for Terminal Lugs

TL200X

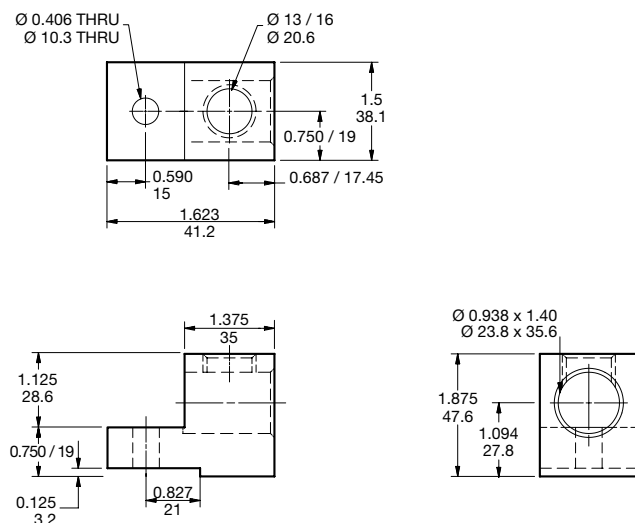
For use with FBJ 200xX



1 wire 300kcmil - #6

TL400

For use with FBJ400

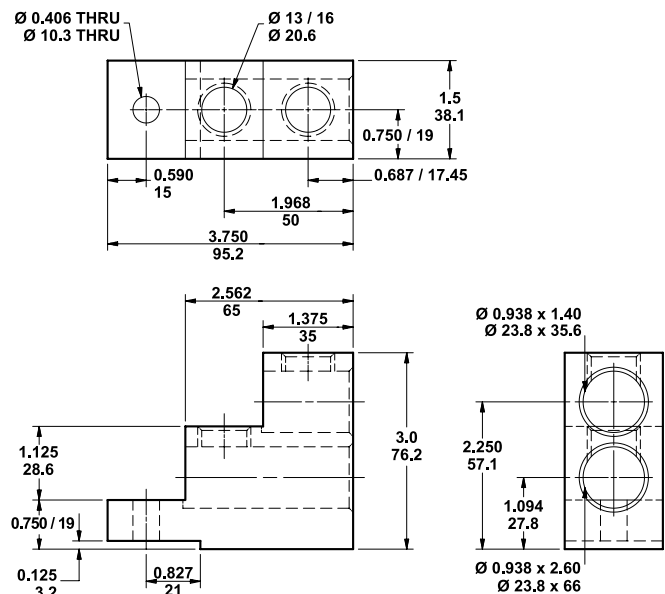


1 wire 600 MCM-2

Note: for FBJ400, please use HM bolts 10 x 30 mm class 6.8.

TL600

For use with FBJ600U and FBL800U



2 wire 600 MCM-2